

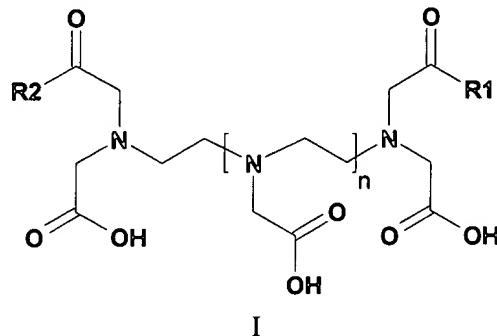
Kindly insert the ABSTRACT as the last page, enclosed herewith as a separate sheet.

IN THE CLAIMS:

Please cancel Claims 1-10 without prejudice to the filing of further claims directed to the cancelled subject matter as Applicants may see fit..

Kindly add new Claims 11-20 as follows:

11. A compound of Formula I:



I

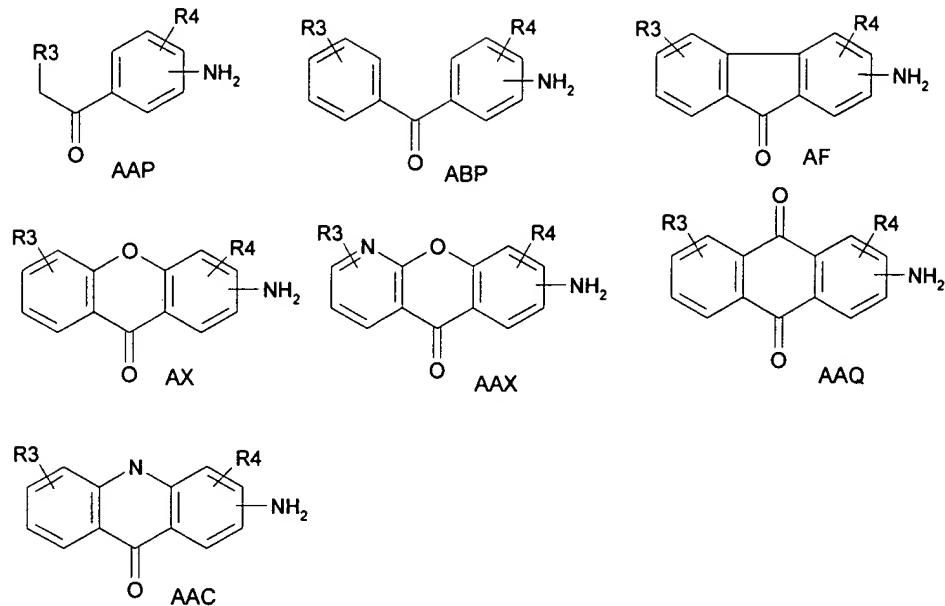
wherein:

$[\text{N}^{\wedge}]_n$  is a chelator selected from the group consisting of: diethylenetriaminepentaacetic acid (DTPA), wherein  $n=1$  in Formula I, triethylenetetraaminehexaacetic acid (TTHA), wherein  $n=2$  in Formula I, and a polycarboxylate derivative of DTPA or TTHA, which chelates a lanthanide metal cation;

R1 is a phenone; and

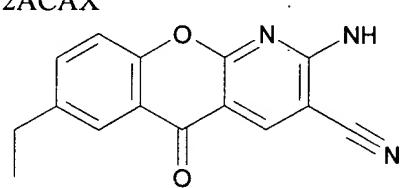
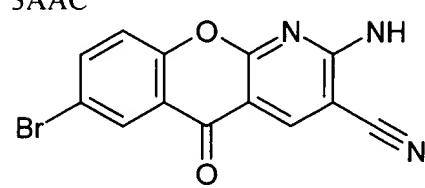
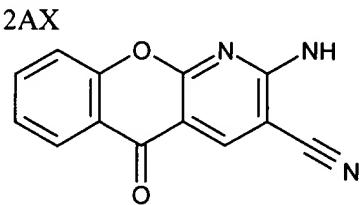
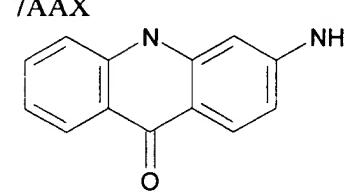
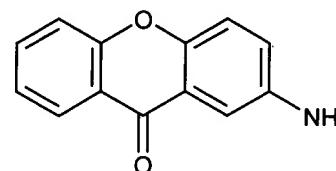
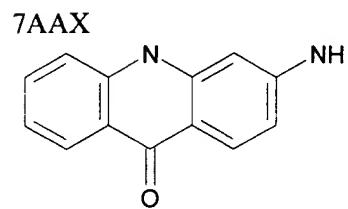
R2 is selected from the group consisting of: OH,  $\text{NH}(\text{CH}_2)_n\text{OH}$ ,  $\text{NH}(\text{CH}_2)_n\text{NH}_2$ ,  $\text{NH}(\text{CH}_2)_n\text{PhNH}_2$ ,  $\text{NH}(\text{CH}_2)_n\text{PhOH}$ ,  $\text{NHCH}(\text{CO}_2\text{H})\text{CH}_2\text{PhNH}_2$ ,  $\text{NH}(\text{CH}_2)_n\text{PhNCS}$ ; wherein  $n$  is 1-6.

12. A compound according to Claim 11 wherein the phenone selected from the group consisting of: aminoacetophenones (AAP), aminobenzophenones (ABP), aminofluorenones (AF), aminoxantones (AX), amino-azaxanthones (AAX), aminoanthraquinones (AAQ), and aminoacridones (AAC):



wherein R3 and R4 are independently selected from the group consisting of: H, OH, NH<sub>2</sub>, COCH<sub>3</sub>, COPh, OPh, NHPh, CN, NO<sub>2</sub>, CO<sub>2</sub>H, and CO<sub>2</sub>CH<sub>3</sub>.

*3* 12. A compound according to Claim 11 wherein the phenone is selected from the following group:

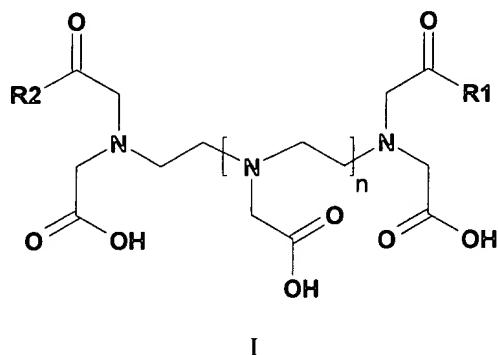


4 14. A compound according to Claim 11 wherein  $[N\wedge]_n$  is DTPA, wherein  $n=1$  in Formula I.

5 15. A compound according to Claim 11 wherein the lanthanide metal cation is selected from the group consisting of: Tb III, Eu III, Sm III, and Dy III.

6 16. A compound according to Claim 15 wherein the lanthanide metal cation is selected from the group consisting of: Eu III or Tb III.

7 17. A method for using a compound of Formula I:



wherein:

$[N\wedge]_n$  is a chelator selected from the group consisting of:  
diethylenetriaminepentaacetic acid (DTPA), wherein  $n=1$  in Formula I,  
triethylenetetraaminehexaacetic acid (TTHA), wherein  $n=2$  in Formula I, and a  
polycarboxylate derivative of DTPA or TTHA, which chelates a lanthanide metal  
cation;

R1 is a phenone; and

R2 is selected from the group consisting of: OH,  $NH(CH_2)_nOH$ ,  
 $NH(CH_2)_nNH_2$ ,  $NH(CH_2)_nPhNH_2$ ,  $NH(CH_2)_nPhOH$ ,  $NHCH(CO_2H)CH_2PhNH_2$ ,  
 $NH(CH_2)_nPhNCS$ ; wherein  $n$  is 1-6;

in fluorescence detection-based techniques or bioassays comprising the steps of:

a. labelling an aliquot comprising donor biomolecules selected from the group consisting of: peptides, proteins, deoxyribonucleic acids (DNAs), ribonucleic acids (RNAs), enzyme substrates, and ligand molecules with a compound of Formula I by a linking reaction with linker R2 to provide a labelled biomolecule assay sample;

b. adding a suitable amount of a suitable organic dye to the labelled biomolecule assay sample;